Catalytic Decomposition of NO

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Abstract

Catalytic decomposition of NO is the most attractive approach for the control of NO emission because of its simplicity. This study focuses on investigation of the feasibility of two novel approaches for improving catalyst activity and resistance to sintering during NO decomposition. The first approach is the use of silanation to stabilize metal crystallites and supports for Cu-ZSM-5 and promoted Pt catalysts; the second is utilization of oxygen spillover and desorption to enhance NO decomposition activity. Successful development of an effective catalyst for NO decomposition will greatly decrease the equipment and operation cost of NO control for coal-fired power plants.